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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
193040 MLRS, MISSILE NUMBER BN-051, ROUND NUMBER V-184/MD-40, 1--ETC(U)
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ERADCOM/ASL-DR-1204

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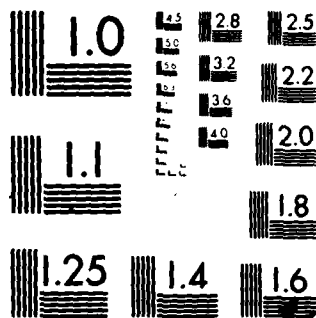
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

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AD A107084

METEOROLOGICAL DATA REPORT

19304D MLRS
Missile Number BN-051
Round Number Y-184/WD40
14 Aug 1981

by

DONALD C. KELLER
Program Support Coordinator
Phone Number (505) 679-9568
AVN Number 349-9568

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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21. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19304D MLRS, Missile Number BN-051, Round Number V-184/MD-40 presented in tabular form. ↑		

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INTRODUCTION

19304D MLRS, Missile Number BN-051, Round Number V-184/MD-40, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1530 MDT, 14 Aug 1981. The scheduled launch time was 1530 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations.

a. Surface:

(1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m³), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air:

(1) Low Level wind data were obtained from Pilot-Balloon observations at:

SITE AND ALTITUDE

LC-33 1550 Meters
NICK 2000 Meters

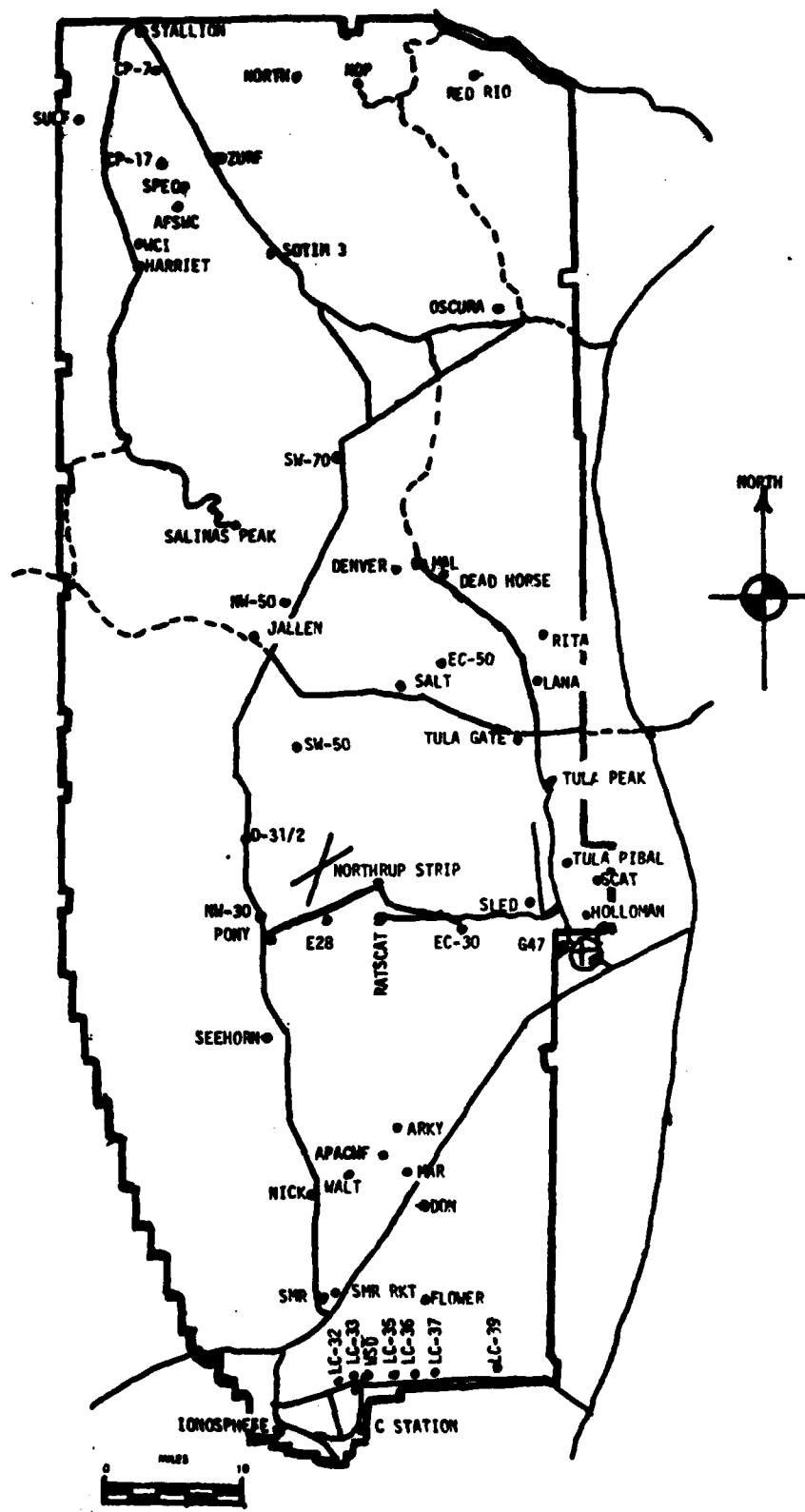
Met Sites: (2) Air structure data (rawinsonde) were collected at the following

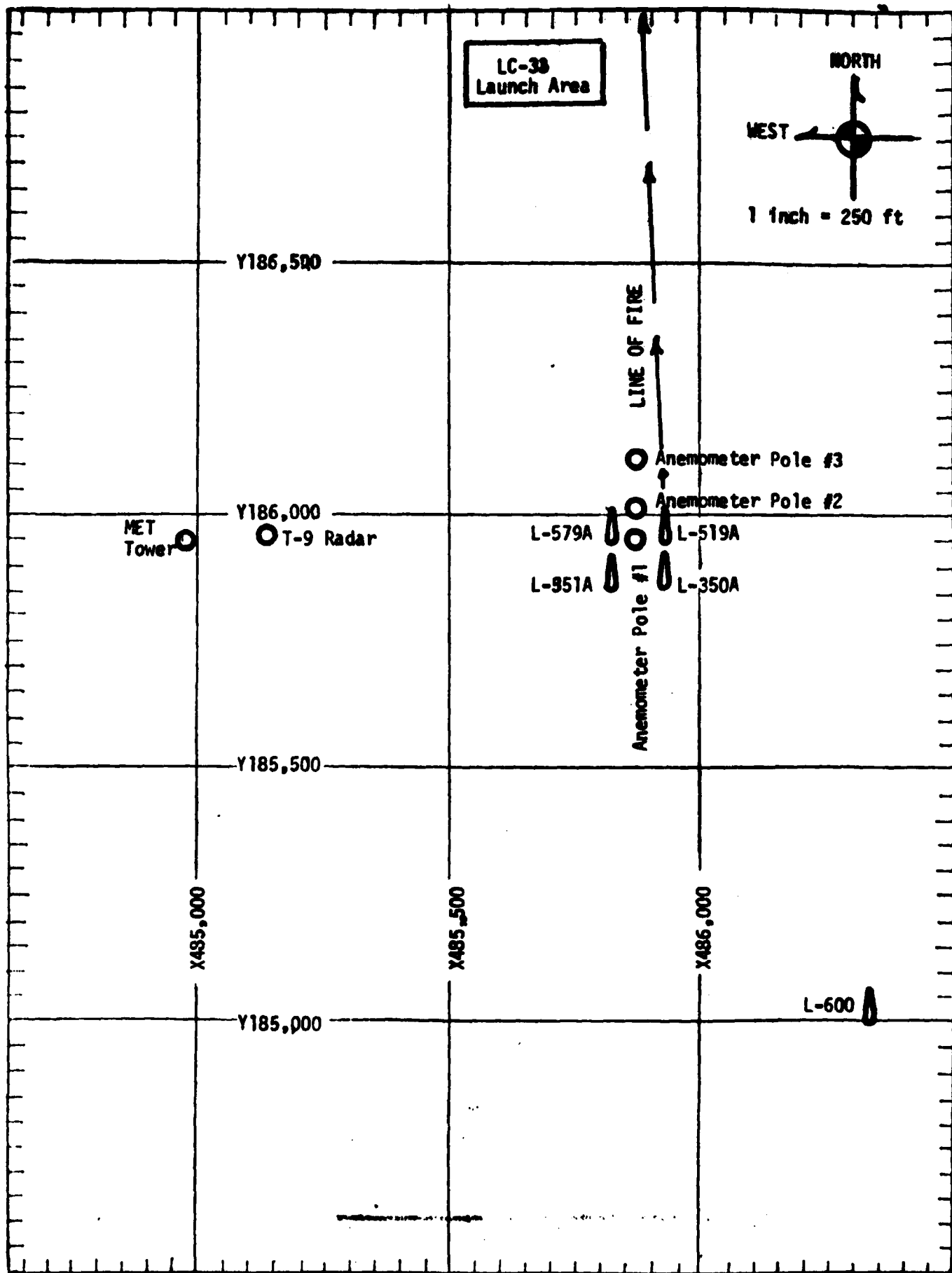
SITE AND LOCATION

WSD 1130 MDT
WSD 1300 MDT
WSD 1530 MDT

Accession No.	
Date Recd.	
From	
To	
Remarks	
<div style="display: flex; justify-content: space-between;"> <div> Dist </div> <div> Avail and/or Special </div> </div>	
A	

WSMR METEOROLOGICAL SITES





PROJECT SURFACE OBSERVATION

TABLE 1									
STATION LC-33									
DATE 14 DAY 1981 YEAR									
X= 485.135.76 Y= 185.919.24 H= 3.988.57									
TIME M D I	PRESSURE mbs	TEMPERATURE OF °C	DEW POINT OF °F	RELATIVE HUMIDITY %	DENSITY gm/m ³	DIRECTION degs Tn	WIND SPEED kts	CHARACTER kts	VISIBIL- ITY
1530	881.8	30.0	14.7	40	1013	175	05		35

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS			
	1st LAYER		2nd LAYER		3rd LAYER					
	AMT	TYPE	AMT	TYPE	AMT	TYPE				
	2	CU	6,000	0	AS	10,000	1	CI	25,000	

PSYCHROMETRIC COMPUTATION

TIME: MDT	1530
DRY BULB TEMP.	30.0
WET BULB TEMP.	19.5
WET BULB DEPR.	10.5
DEW POINT	14.7
RELATIVE HUMID.	40%

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	C A	L M	T-30	C A	L M	T-30	258	05
T-20	C A	L M	T-20	C A	L M	T-20	257	03
T-10	C A	L M	T-10	C A	L M	T-10	357	01
T0.0	C A	L M	T0.0	230	01	T0.0	261	02
T+10	C A	L M	T+10	228	03	T+10	215	04

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	139	07	T-30	169	04
T-20	157	07	T-20	163	04
T-10	162	07	T-10	212	03
T0.0	151	07	T0.0	205	03
T+10	194	06	T+10	168	04

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	194	03	T-30	119	03
T-20	175	02	T-20	106	05
T-10	220	01	T-10	105	05
T0.0	220	03	T0.0	114	05
T+10	227	04	T+10	126	05

TABLE 4

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 14 Aug 1981

SITE: LC-33

TIME: 1530 MDT

WSTM COORDINATES:

X= 484,837.34

Y= 184,124.44

H= 3,975.57

SITE: NICK

TIME: 1550 MDT

WSTM COORDINATES:

X= 470-734.56

Y= 255,775.64

H= 4,126.57

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	175	05
150	177	02
210	192	02
270	222	01
330	257	01
390	290	01
500	327	03
650	332	06
800	321	05
950	331	03
1150	342	06
1350	349	06
1550	337	05
1750	M I S G	
2000	M I S G	

Data obtained from Double Theodolite
Pilot-Balloon Observation.

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	195	03
150	178	03
210	180	03
270	193	03
330	208	02
390	209	02
500	198	02
650	099	01
800	013	02
950	002	03
1150	340	03
1350	310	09
1550	328	09
1750	321	08
2000	297	03

Data obtained from Single Theodolite
Pilot-Balloon Observation.

TABLE 5

AIMING AND T-TIME COMPUTER MET MESSAGES
14 Aug 1981WSD 1130 MDT
METCM1324064
141750122884

00124004	30020884
01123004	29880874
02096001	29570849
03011002	29260811
04000000	28920765
05007003	28550721
06527001	28270679
07320006	28070639
08326010	27700601
09314009	27330565

WSD 1300 MDT
METCM1324064
141900122883

00507003	30340883
01477004	30220873
02591002	29920849
03522001	29550811
04559003	29110765
05047005	28680721
06550005	28350679
07348006	28110640
08348013	27780602
09325013	27420566

WSD 1530 MDT
METCM1324064
142150122882

00311005	30530882
01358008	30390872
02523005	30050848
03476005	29610810
04306002	29110764
05597003	28710720
06452004	28410679
07379010	28050639
08358012	27740601
09342013	27360565

STATION ALTITUDE 3989.00 FEET MSL
14 AUG. 61 1130 HRS MDT
ASCENSION NO. 552

SIGNIFICANT LEVEL DATA

22600.0552
WHITE SANDS

TABLE 6

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
884.1	3989.0	24.9	15.0	54.0
850.0	5115.2	20.1	11.8	59.0
830.0	5788.6	18.1	11.9	67.0
808.0	6544.7	17.1	9.5	61.0
782.6	7438.9	15.3	9.2	67.0
745.2	8798.7	12.5	6.8	68.0
700.0	10514.9	8.6	3.4	70.0
690.4	10890.9	8.3	4.3	76.0
672.4	11608.5	7.4	3.3	75.0
645.6	12710.1	6.8	-4	60.0
602.6	14561.1	3.1	-5.3	54.0
577.2	15703.7	.3	-6.1	62.0
560.4	16482.2	-5	-8.4	55.0
543.4	17289.8	-2.4	-10.9	52.0
527.0	18088.3	-4.0	-7.6	76.0
515.6	18656.5	-4.0	-10.2	62.0
500.0	19452.1	-5.7	-11.2	65.0
477.8	20619.6	-7.9	-12.9	67.0
462.2	21466.9	-9.3	-17.3	52.0
447.0	22315.7	-10.7	-19.8	47.0
428.1	23402.6	-13.8	-23.1	45.0
417.2	24046.9	-14.7	-20.7	60.0
400.0	25092.7	-16.6	-23.5	55.0

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

STATION ALTITUDE 3489.00 FEET MSL
14 AUG. 81 1130 HRS MDT
ASCENSION NO. 552

UPPER AIR DATA
2260020552
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

TABLE 7

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	884.1	24.9	54.0	1025.8	675.0	70.0	4.1	1.000301
4000.0	883.8	24.9	54.0	1025.6	675.0	69.9	4.1	1.000301
4500.0	868.5	22.7	56.3	1015.6	672.4	63.4	3.2	1.000294
5000.0	853.4	20.6	58.5	1005.8	669.8	52.1	2.3	1.000287
5500.0	838.5	19.0	63.6	993.7	667.9	30.3	1.7	1.000283
6000.0	823.8	17.8	65.3	980.2	666.6	9.6	1.6	1.000278
6500.0	809.3	17.2	61.4	965.7	665.7	356.9	1.8	1.000269
7000.0	795.0	16.2	64.1	951.8	664.5	15.1	1.4	1.000266
7500.0	780.9	15.2	67.0	938.2	663.4	34.1	1.3	1.000262
8000.0	766.9	14.1	67.4	925.0	662.1	28.3	1.4	1.000256
8500.0	753.3	13.1	67.8	912.0	660.8	14.6	1.5	1.000251
9000.0	739.7	12.0	68.2	899.2	659.5	351.4	2.1	1.000245
9500.0	726.4	10.9	68.8	886.7	658.1	352.1	2.6	1.000240
10000.0	713.3	9.8	69.4	874.3	656.7	11.6	3.0	1.000235
10500.0	700.4	8.6	70.0	862.2	655.4	13.4	2.6	1.000230
11000.0	687.6	8.2	75.8	847.7	654.9	357.5	1.5	1.000228
11500.0	675.1	7.5	75.2	834.2	654.1	258.2	.8	1.000223
12000.0	662.8	7.2	69.7	820.3	653.6	218.9	2.6	1.000217
12500.0	650.6	6.9	62.9	806.4	653.2	196.6	4.7	1.000210
13000.0	638.7	6.2	59.1	793.8	652.2	184.5	7.0	1.000204
13500.0	626.9	5.2	57.4	782.1	651.0	185.1	8.5	1.000199
14000.0	615.3	4.2	55.8	770.6	649.7	182.7	9.7	1.000194
14500.0	604.0	3.2	54.2	759.3	648.5	180.3	9.2	1.000190
15000.0	592.7	2.0	57.1	748.4	647.1	178.7	8.8	1.000187
15500.0	581.6	.8	60.6	737.8	645.6	179.6	8.3	1.000184
16000.0	570.7	-0.0	59.3	726.2	644.6	176.5	8.7	1.000180
16500.0	560.0	-0.5	54.9	714.1	643.9	171.0	9.8	1.000176
17000.0	549.4	-1.7	53.1	703.8	642.5	166.5	10.8	1.000171
17500.0	539.0	-2.8	58.3	693.2	641.2	162.8	11.7	1.000169
18000.0	528.8	-3.8	73.3	682.3	640.1	165.8	13.0	1.000170
18500.0	518.7	-4.0	65.9	669.9	639.8	169.8	14.4	1.000165
19000.0	508.8	-4.7	63.3	659.0	638.9	176.4	15.6	1.000161
19500.0	499.1	-5.8	65.1	649.0	637.6	183.5	17.0	1.000158
20000.0	489.5	-6.7	65.9	638.8	636.5	189.9	18.1	1.000155
20500.0	480.0	-7.7	66.8	628.8	635.3	195.5	19.2	1.000152
21000.0	470.7	-8.5	60.3	618.7	634.2	194.7	20.2	1.000148
21500.0	461.6	-9.4	51.8	608.8	633.1	193.0	21.3	1.000144
22000.0	452.6	-10.2	48.9	598.9	632.1	188.5	21.2	1.000141
22500.0	443.7	-11.2	46.7	589.6	630.8	183.6	21.2	1.000138
23000.0	435.0	-12.7	45.7	581.2	629.1	180.5	20.9	1.000135

UPPER AIR DATA
 2260020552
 WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
 14 AUG. 81
 1130 HRS MDT
 ASCENSION NO. 552

GEOMETRIC ALTITUDE 3989.00 FEET MSL
 14 AUG. 81
 1130 HRS MDT
 ASCENSION NO. 552

TABLE 7 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS			
23500.0	426.4	-13.9	-22.7	47.3	572.6	627.5	20.6	177.3	20.6	1.000133
24000.0	418.0	-14.6	-20.9	58.9	562.7	626.7				1.000132
24500.0	409.7	-15.5	-21.9	57.8	553.4	625.6				1.000129
25000.0	401.5	-16.4	-23.2	55.4	544.3	624.5				1.000127

STATION ALTITUDE 3989.00 FEET MSL
14 AUG. 81 1130 HRS MDT
ASCENSION NO. 552

MANDATORY LEVELS
2260020552
WHITE SANDS

GEODETTIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

TABLE 8

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5111.	20.1	11.8	59.		48.4	2.2
800.0	6018.	16.5	9.4	63.		7.7	1.5
750.0	6613.	12.9	7.1	68.		7.8	1.6
700.0	10504.	8.6	3.4	70.		13.2	2.6
650.0	12513.	6.9	.2	63.		196.2	4.8
600.0	14659.	2.8	-5.4	55.		179.4	9.1
550.0	16952.	-1.7	-9.9	53.		166.8	10.7
500.0	19424.	-5.7	-11.2	65.		182.8	16.8
450.0	22112.	-10.4	-19.3	48.		187.2	21.2
400.0	25050.	-16.6	-23.5	55.			

STATION ALTITUDE 5989.00 FEET MSL
14 AUG. 81 1300 HRS MDT
ASCENSION NO. 553

SIGNIFICANT LEVEL DATA
2260020553
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 9

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	
883.2	28.0	15.3	46.0
850.0	24.0	13.5	52.0
792.4	18.3	9.4	56.0
736.6	13.3	5.5	59.0
700.0	9.6	5.0	73.0
691.2	9.0	5.0	76.0
655.8	7.2	2.7	73.0
620.8	5.4	-2.2	58.0
578.6	1.4	-5.7	59.0
537.4	-2.2	-5.3	79.0
500.0	-4.4	-10.2	64.0
481.4	-6.3	-13.4	57.0
465.0	-8.0	-15.2	56.0
449.8	-9.6	-15.3	63.0
425.4	-12.2	-23.9	37.0
420.2	-12.5	-25.1	34.0
413.0	-13.6	-18.6	66.0
400.0	-15.0	-21.0	60.0

STATION ALTITUDE 3989.00 FEET MSL
 14 AUG. 81
 ASCENSION NO. 553

UPPER AIR DATA
 2260020553
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LONG DEG

TABLE 10

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
						METER	KNOTS			
3989.0	883.2	28.0	15.3	46.0	1014.1	678.6		285.0	2.9	1.000299
4000.0	882.9	28.0	15.3	46.1	1013.8	678.5		285.0	2.9	1.000299
4500.0	867.8	26.2	14.5	46.8	1002.7	676.4		286.2	2.6	1.000294
5000.0	852.9	24.4	13.7	51.5	991.8	674.3		287.6	2.2	1.000288
5500.0	838.1	22.9	12.7	52.8	979.8	672.5		289.7	1.9	1.000282
6000.0	823.6	21.4	11.7	53.8	967.8	670.8		292.5	1.6	1.000276
6500.0	809.2	20.0	10.6	54.8	955.9	669.0		296.2	1.3	1.000270
7000.0	795.2	18.6	9.6	55.8	944.1	667.3		296.1	1.7	1.000264
7500.0	781.1	17.3	8.6	56.6	931.7	665.8		296.1	2.0	1.000258
8000.0	767.3	16.1	7.7	57.3	919.3	664.3		322.4	2.3	1.000252
8500.0	753.6	14.9	6.7	58.1	907.1	662.8		342.4	2.9	1.000247
9000.0	740.3	13.6	5.7	58.8	895.0	661.3		6.4	3.5	1.000242
9500.0	727.0	12.3	5.4	62.6	882.9	659.8		21.6	4.4	1.000239
10000.0	713.9	11.0	5.3	67.6	871.0	658.3		11.2	4.0	1.000236
10500.0	701.1	9.7	5.0	72.6	859.3	656.8		354.7	3.7	1.000233
11000.0	688.3	8.9	4.8	75.8	846.3	655.8		325.3	3.8	1.000230
11500.0	675.8	8.2	4.0	74.7	832.9	655.0		304.8	3.3	1.000225
12000.0	663.5	7.6	3.2	73.7	819.7	654.2		271.6	2.2	1.000220
12500.0	651.4	7.0	2.1	71.1	806.7	653.4		214.7	3.5	1.000214
13000.0	639.4	6.4	.5	66.1	793.9	652.6		197.4	6.6	1.000208
13500.0	627.7	5.8	-1.2	61.0	781.3	651.7		147.8	9.1	1.000201
14000.0	616.1	5.0	-2.6	58.1	769.3	650.7		194.6	11.4	1.000196
14500.0	604.7	3.9	-3.5	58.4	758.1	649.4		195.6	11.9	1.000192
15000.0	593.5	2.8	-4.4	56.6	747.0	648.1		192.5	12.3	1.000188
15500.0	582.5	1.8	-5.4	58.9	736.1	646.8		188.0	12.6	1.000185
16000.0	571.6	.8	-5.6	62.3	724.9	645.7		184.3	13.2	1.000182
16500.0	560.8	-.1	-5.4	67.4	713.6	644.6		182.5	14.5	1.000180
17000.0	550.3	-1.0	-5.3	72.6	702.5	643.5		182.1	15.4	1.000178
17500.0	539.9	-2.0	-5.3	77.7	691.6	642.5		183.9	15.7	1.000175
18000.0	529.7	-2.6	-6.3	76.0	680.3	641.6		187.5	15.4	1.000171
18500.0	519.6	-3.2	-7.5	72.0	669.9	640.9		194.4	14.3	1.000167
19000.0	509.7	-3.8	-8.8	68.0	657.8	640.1		200.9	13.8	1.000163
19500.0	500.1	-4.4	-10.2	64.0	646.8	639.3		206.2	13.9	1.000159
20000.0	490.5	-5.4	-11.8	60.5	636.8	638.1		207.1	14.4	1.000155
20500.0	481.1	-6.3	-13.4	57.0	627.0	636.9		204.1	15.3	1.000151
21000.0	471.8	-7.3	-14.4	56.4	617.2	635.7		199.4	15.6	1.000148
21500.0	462.7	-8.2	-15.2	57.1	607.5	634.6		192.7	15.5	1.000145
22000.0	453.7	-9.2	-15.3	61.2	597.8	633.4		186.3	15.2	1.000143
22500.0	444.9	-10.1	-16.8	57.8	588.4	632.3		179.9	14.9	1.000140
23000.0	436.2	-11.0	-19.7	48.6	579.0	631.1		177.3	15.2	1.000136

STATION ALTITUDE 3989.00 FEET MSL	UPPER AIR DATA	GEODETIC COORDINATES
14 AUG. 81	226P020553	32.91043 LAT DEG
ASCENSION NO. 553	WHITE SANDS	106.37033 LON DEG

TABLE 10 CONT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METR	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	WET POINT CENTIGRADE			KNOTS	FEET	DIRECTION DEGREES (TN)	SPEED KNOTS	
23500.0	427.6	-12.0	-22.9	34.4	569.8	629.9		176.9	15.0	1.000132
24000.0	419.2	-12.7	-23.9	36.4	560.2	629.0				1.000130
24500.0	410.9	-13.8	-18.9	65.1	551.3	627.8				1.000131
25000.0	402.8	-14.7	-20.5	61.3	542.3	626.7				1.000126

STATION ALTITUDE 3949.00 FEET MSL
 14 AUG. 81 1300 HRS PDT
 ASCENSION NO. 553

MANUATORY LEVELS
 2260020553
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 11

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	5096.	24.0	13.5	52.	248.0	2.2
800.0	6824.	19.1	10.0	55.	296.2	1.5
750.0	8631.	14.5	6.4	58.	348.9	3.1
700.0	10531.	9.6	5.0	73.	352.6	3.6
650.0	12544.	6.9	1.9	71.	211.7	3.8
600.0	14694.	3.5	-3.9	58.	194.4	12.1
550.0	16994.	-1.1	-5.3	73.	182.1	15.4
500.0	19475.	-4.4	-10.2	64.	206.2	13.9
450.0	22175.	-9.6	-15.3	63.	183.8	15.1
400.0	25130.	-15.0	-21.0	60.		

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

SIGNIFICANT LEVEL DATA

2260020554
WHITE SANDS

TABLE 12

STATION ALTITUDE 3989.00 FEET MSL
14 AUG. 81
ASCENSION NO. 554

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		ATP DEGREES	DEWPOINT CENTIGRADE	
881.8	3489.0	30.0	14.5	39.0
850.0	5059.2	25.3	13.5	48.0
816.0	6231.6	21.5	12.1	55.0
797.6	6880.1	19.5	11.0	56.0
734.8	9177.2	12.9	8.8	76.0
726.2	9502.7	12.1	8.0	76.0
700.0	10514.3	10.8	5.1	66.0
691.2	10861.6	10.6	5.2	69.0
639.6	12971.3	5.6	1.2	73.0
622.6	13696.5	5.3	-9	64.0
548.8	17047.2	-1.6	-7.5	64.0
517.4	18586.2	-3.4	-12.1	51.0
500.0	19473.3	-5.4	-12.8	56.0
479.0	20577.7	-7.5	-11.3	74.0
471.6	20976.2	-8.4	-15.4	57.0
464.2	21380.2	-8.5	-15.5	67.0
449.6	22193.8	-10.2	-14.4	71.0
426.4	23534.9	-11.5	-17.9	59.0
400.0	25136.5	-15.4	-20.5	65.0

STATION ALTITUDE 3989.00 FEET MSL
19 AUG. 81 1530 HRS PDT
ASCENSION NO. 554

UPPER AIR DATA

2260020554
WILF SANDS

GEODETTIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 13

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GRAMS PER CUBIC METER	SPEED OF SOUND METERS PER SECOND	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
3989.0	891.8	30.0	39.0	1006.1	680.7	175.0	5.1	1.000293
4000.0	881.5	30.0	39.1	1005.9	680.7	175.3	5.0	1.000293
4500.0	866.5	27.8	43.3	996.1	678.2	190.0	4.1	1.000290
5000.0	851.7	25.6	47.5	986.4	675.7	211.0	3.6	1.000286
5500.0	837.1	23.9	50.6	975.1	673.7	235.0	3.6	1.000282
6000.0	822.6	22.3	53.6	963.7	671.8	255.0	4.2	1.000277
6500.0	808.3	20.7	56.2	952.2	669.9	268.7	5.2	1.000272
7000.0	794.2	19.2	58.9	940.6	668.1	266.7	4.3	1.000268
7500.0	780.1	17.7	62.9	928.6	666.5	265.1	3.3	1.000264
8000.0	766.3	16.3	66.8	916.7	664.8	286.9	1.6	1.000260
8500.0	752.8	14.8	70.7	905.1	663.1	14.6	1.2	1.000256
9000.0	739.5	13.4	74.6	893.7	661.4	16.0	1.4	1.000252
9500.0	726.3	12.1	76.0	882.0	659.8	4.5	1.4	1.000247
10000.0	713.2	11.5	72.1	868.4	658.9	285.6	1.7	1.000239
10500.0	700.4	10.8	68.1	855.1	658.1	259.4	3.6	1.000232
11000.0	687.7	10.3	69.3	841.2	657.4	258.0	4.1	1.000228
11500.0	675.2	9.1	70.2	829.6	656.0	252.8	4.4	1.000223
12000.0	662.9	7.9	71.2	818.1	654.5	241.7	4.4	1.000219
12500.0	650.8	6.7	72.1	806.7	653.1	225.6	6.5	1.000214
13000.0	638.9	5.6	72.6	795.4	651.7	216.9	9.8	1.000209
13500.0	627.2	5.4	66.4	781.6	651.3	211.4	11.1	1.000203
14000.0	615.5	4.7	64.0	769.2	650.4	206.7	11.9	1.000198
14500.0	604.0	3.6	64.0	757.8	649.2	202.5	11.4	1.000194
15000.0	592.8	2.6	64.0	746.6	647.9	198.7	11.2	1.000190
15500.0	581.7	1.6	64.0	735.5	646.7	197.4	12.0	1.000186
16000.0	570.9	.6	64.0	724.6	645.4	196.4	12.5	1.000182
16500.0	560.2	-5	64.0	713.9	644.1	195.7	12.7	1.000178
17000.0	549.8	-1.5	64.0	703.3	642.9	201.0	12.6	1.000175
17500.0	539.4	-2.1	60.2	691.8	642.1	210.3	12.4	1.000170
18000.0	529.1	-2.7	56.0	680.3	641.3	219.4	11.7	1.000166
18500.0	519.1	-3.3	51.7	668.9	640.5	223.6	11.2	1.000162
19000.0	509.2	-4.3	53.3	658.7	639.3	219.1	10.6	1.000157
19500.0	499.5	-5.5	56.4	648.9	638.0	212.1	10.2	1.000153
20000.0	489.9	-6.4	64.6	638.6	636.9	203.1	10.1	1.000155
20500.0	480.4	-7.4	72.7	628.4	635.8	197.7	10.8	1.000154
21000.0	471.2	-8.4	57.6	619.1	634.4	194.6	12.0	1.000148
21500.0	462.0	-8.8	67.6	607.7	634.0	195.2	12.9	1.000147
22000.0	453.0	-9.8	70.0	598.3	632.8	196.1	13.9	1.000144
22500.0	444.2	-10.5	68.3	588.2	631.9	197.4	14.5	1.000141
23000.0	435.5	-11.0	63.8	577.8	631.3	198.7	15.4	1.000138

STATION ALTITUDE 3989.00 FEET PSL
 14 AUG. 81 1530 HRS WDT
 ASCENSION NO. 554

UPPER AIR DATA
 226002U554
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 13 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
23500.0	427.0	-11.5	54.3	567.7	630.6	200.3	17.0	1.000135
24000.0	418.6	-12.6	60.7	559.0	629.2			1.000132
24500.0	410.3	-13.9	62.6	550.6	627.7			1.000130
25000.0	402.2	-15.1	64.5	542.3	626.2			1.000128

STATION ALTITUDE 3989.00 FEET MSL
14 AUG. 81 1530 HRS MDT
ASCENSION NO. 554

MANUATORY LEVELS
2260020554
WHITE SANDS

TABLE 14

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5055.	25.3	13.5	48.	213.7	3.5
800.0	6789.	19.8	11.2	58.	267.7	4.7
750.0	8601.	14.5	9.5	72.	25.1	1.5
700.0	10504.	10.8	5.1	68.	259.3	3.6
650.0	12522.	6.6	2.0	72.	224.8	6.7
600.0	14670.	3.3	-2.9	64.	200.9	11.2
550.0	16968.	-1.5	-7.4	64.	200.7	12.6
500.0	19445.	-5.4	-12.8	56.	212.8	10.2
450.0	22137.	-10.2	-14.4	71.	196.5	14.1
400.0	25094.	-15.4	-20.5	65.		

GEODETIC COORDINATES
32.40043 LAT OLG
106.37033 LONG OLG

